E1

(3)

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

(19) Weltorganisation für geistiges Eigentum
Internationales Büro

(43) Internationales Veröffentlichungsdatum
20. Dezember 2001 (20.12.2001)

PCT

(10) Internationale Veröffentlichungsnummer
WO 01/97180 A2

(51) Internationale Patentklassifikation⁷: G07D 7/00

(21) Internationales Aktenzeichen: PCT/EP01/06579

(22) Internationales Anmeldedatum:
11. Juni 2001 (11.06.2001)

(25) Einreichungssprache: Deutsch

(26) Veröffentlichungssprache: Deutsch

(30) Angaben zur Priorität:
100 29 051.5 13. Juni 2000 (13.06.2000) DE

(71) Anmelder *(für alle Bestimmungsstaaten mit Ausnahme von US)*: GIESECKE & DEVRIENT GMBH [DE/DE]; Prinzregentenstrasse 159, 81677 München (DE).

(72) Erfinder; und
(75) Erfinder/Anmelder *(nur für US)*: REINISCH, Helmut, Karl [AT/DE]; Klingerstrasse 30, 81369 München (DE). WEILACHER, Karl, Hermann [DE/DE]; Dahlienweg 3, 85241 Hebertshausen (DE). LÖFFLER, Lukas [DE/DE]; Tannenstrasse 17a, 82041 Deisenhofen (DE).

(74) Anwalt: KLUNKER, SCHMITT-NILSON, HIRSCH; Winzererstrasse 106, 80797 München (DE).

(81) Bestimmungsstaaten *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Bestimmungsstaaten *(regional)*: ARIPO-Patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), eurasisches Patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), europäisches Patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI-Patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Veröffentlicht:
— *ohne internationalen Recherchenbericht und erneut zu veröffentlichen nach Erhalt des Berichts*

Zur Erklärung der Zweibuchstaben-Codes und der anderen Abkürzungen wird auf die Erklärungen ("Guidance Notes on Codes and Abbreviations") am Anfang jeder regulären Ausgabe der PCT-Gazette verwiesen.

(54) Title: METHOD FOR VERIFYING THE AUTHENTICITY OF DOCUMENTS

(54) Bezeichnung: VERFAHREN ZUR ECHTHEITSPRÜFUNG VON DOKUMENTEN

(57) Abstract: The invention relates to a method for verifying the authenticity of documents, especially that of bank notes, valuable documents or security documents, on the basis of authenticity criteria. The aim of the invention is to provide a more reliable manner of verifying the authenticity of a document. In order to achieve this, at least two different levels of authenticity with at least one authenticity criterion respectively are provided. Each individual authenticity level differs from the other in at least one authenticity criterion. One authenticity level is selected from the various authenticity levels and the document is verified on the basis of the authenticity criteria of the selected authenticity level. The selected authenticity level is allocated to said document if it fulfils the authenticity criteria thereof. The inventive method increases the reliability of the verification of document authenticity as it enables documents to be detected which satisfy higher authenticity requirements i.e. stricter authenticity criteria than other documents, and which are thus more likely to be authentic.

(57) Zusammenfassung: Die Erfindung betrifft ein Verfahren zur Echtheitsprüfung von Dokumenten, insbesondere Banknoten, Wert- oder Sicherheitsdokumenten, anhand von Echtheitskriterien. Zur Erhöhung der Zuverlässigkeit bei der Echtheitsprüfung von Dokumenten sind mindestens zwei unterschiedliche Echtheitsklassen mit jeweils einem oder mehreren Echtheitskriterien vorgesehen, wobei sich die einzelnen Echtheitsklassen in mindestens einem Echtheitskriterium voneinander unterscheiden. Es wird eine Echtheitsklasse aus den unterschiedlichen Echtheitsklassen ausgewählt und das Dokument wird anhand der Echtheitskriterien der ausgewählten Echtheitsklasse geprüft. Dem Dokument wird die ausgewählte Echtheitsklasse zugeordnet, wenn deren Echtheitskriterien von dem Dokument erfüllt werden. Hierdurch wird eine höhere Zuverlässigkeit der Echtheitsprüfung erreicht, da sich mit diesem Verfahren diejenigen Dokumente ermitteln lassen, die höheren Echtheitsanforderungen, d.h. strengeren Echtheitskriterien genügen als die restlichen Dokumente und daher mit höherer Wahrscheinlichkeit echt sind.

WO 01/97180 A2

Method for verifying the authenticity of documents

The invention relates to methods and devices for verifying the authenticity of documents, especially that of bank notes, valuable documents or security documents, in accordance with the preamble of independent claims.

The verification of authenticity of documents is carried out, in general, by measuring certain authenticity characteristics, for example optical, electrical or magnetic characteristics, of a document to be verified, and by subsequently checking the measured authenticity characteristics with preset authenticity criteria. For example, the optical reflection properties of the documents are measured, and subsequently it is verified if the measured reflection properties are below or above a certain threshold value as a corresponding authenticity criterion. Depending on the test result, the document will be classified as authentic or forged.

An increase in the reliability of recognizing forgeries can be achieved, among other ways, by tightening the authenticity criteria when checking certain authenticity characteristics, for example by increasing or decreasing the threshold values. In practice, however, the authenticity criteria cannot be tightened at will, since otherwise the number of authentic documents that are recognized as not being authentic — and might be rejected or classified as forgeries — would become too high.

This would lead, for example in bill processing machines that are used especially in business banks for the checking and balancing of deposits, to increased expenditures in the manual and, possibly, additional machine processing of bills that were recognized as not authentic.

Page 2

In case of an authenticity check in money deposit machines, a general tightening of the authenticity criteria would lead to the fact that especially used or dirty authentic bills, in which the form of the authenticity characteristics is reduced when compared with newly printed bills, would not be recognized as authentic bills and, thus, — depending on the case — would be rejected or withheld as presumed forgeries.

The reliability in the recognition of forged bills is, thus, limited by the required low number of bills that are recognized as not authentic. This is problematic especially in cases when, due to authenticity criteria that are too "soft", forgeries are not recognized as such and re-circulated, for example after forged bills were deposited in an SB recycling ATM by a customer, and these bills were then paid out to other customers, since they were not recognized as forgeries.

It is the task of the present invention to specify the procedures and devices for the verification of authenticity, which will enable the verification to be carried out with increased reliability, especially without simultaneously increasing the number of bills that are wrongly recognized as not being authentic.

This task is solved by the procedure for the verification of authenticity in accordance with claims 1 and 14, respectively, and the corresponding devices for the verification of authenticity in accordance with claims 18 and 21, respectively.

Page 3

In case of the method for the verification of authenticity in accordance with claim 1, at least two different levels of authenticity with at least one authenticity criterion, respectively, are provided, where each individual authenticity level differs from the other in at least one authenticity criterion. For the verification of authenticity, one authenticity level is selected from the various authenticity levels, and the document is verified on the basis of the authenticity criteria of the selected authenticity level. The selected authenticity level is allocated to said document if it fulfils the authenticity

criteria thereof. The authenticity criteria can be, for example, threshold values or intervals for the authenticity characteristics used for the verification. The authenticity characteristics that can be used can be optical, magnetic, electrical or physical characteristics, e.g. optical reflection, transmission or emission, magnetic permeability, electrical conductivity, permittivity, thickness or format of the document and water mark.

The invention is based on the concept of bringing together different authenticity criteria for the verification of authenticity of documents in several authenticity levels, where the demands on authenticity are set differently for different authenticity levels, because a different number of authenticity criteria and/or differently strict authenticity criteria belong to each authenticity level. For example, if an authenticity level with high demands on authenticity is selected, e.g. with very high threshold values for the optical reflection or transmission, the authenticity of documents that fulfill the authenticity criteria of the selected authenticity level can be affirmed with a high probability. Documents that do not fulfill the authenticity criteria of a selected authenticity level can be verified by using additionally selected authenticity levels with lower demands on authenticity, for example with lower threshold values, where the authenticity of such documents can be affirmed with an accordingly lower probability.

Page 4

In general, this procedure leads to a separation of the authenticity characteristics, that is the measured authenticity features, of the documents to be verified into different authenticity levels. This differentiation of the results of the verification of authenticity makes it possible to detect those documents that are authentic with a higher degree of probability than with the state of the art procedures for the verification of authenticity, so that the general reliability in the determination of authenticity is increased. At the same time, the remaining documents can continue to be verified with the previously customary authenticity criteria — which are "less strict" — so that the number of

documents recognized as not authentic remains low.

In a further development of the method, it is planned to determine the condition and/or the unitization of the document, followed by the selection of the authenticity level based on the condition and/or the unitization of the document. Unitization refers to the value or currency of the document to be verified. The condition of the document is generally given by status characteristics, such as the degree of soiling, limpness, damage, e.g. tears, holes or missing areas in the print image, as well as foreign materials, e.g. adhesive tape. For example, the selection of the authenticity level for the verification of authenticity of a document may be chosen depending on the degree of soiling of said document, where clean and undamaged documents can be verified with much stricter authenticity criteria, e.g. higher threshold values, than strongly soiled or damaged documents. In this way, the reliability in the recognition of forgeries of clean or lightly soiled documents is increased markedly. In general, documents in very good condition can be identified as authentic or forged with a high decree of reliability by using this verification of authenticity that is based on the status condition of the documents.

Page 5

Since in this case only the verification of the documents in good condition is carried out with stricter criteria, the number of documents recognized as not authentic will continue to remain low.

A further aspect of the invention, in accordance with claim 14, consists of the fact that a part of the authenticity criteria used for the verification of authenticity, is determined on the basis of forged documents. In this way, the verification of authenticity with fixed authenticity criteria is extended by an additional verification of authenticity with additional authenticity criteria, where the additional authenticity criteria are determined on the basis of forged documents. The determination of the additional authenticity criteria is carried out, in general, in a separate procedure, for

example in specially provided facilities, in which the forged documents are especially verified for characteristic differences from authentic documents. From the differences thus found, additional authenticity criteria are determined, which will then be added to the method for the verification the authenticity. In this case, documents are verified on the basis of fixed authenticity criteria and classified as authentic if they meet the authenticity criteria. In addition, forgeries can also be recognized if the verified documents do not meet the additional authenticity criteria, determined on the basis of known forgeries, which criteria preferentially concern the characteristic differences between a detected forgery and authentic documents. In this way, an increased reliability in the detection of forgeries, especially with respect to known forgeries and forgeries in circulation, is achieved.

The invention will now be explained in greater detail using the examples shown in the Figures.

Page 6

Fig. 1 shows the schematic layout of a device for verifying the authenticity of documents in accordance with the invention;

Fig. 2 shows the schematic layout of a system for the verification of authenticity on the basis of authenticity criteria determined by using forged documents;
and

Fig. 3 shows the schematic layout of a system for processing the deposited bills.

Figure 1 shows the schematic layout of a device for verifying the authenticity of documents in accordance with the invention. The documents 10 made available in an input device 11, for example bills, are withdrawn individually from the input device 11 and transported by means of a transport system 14 to the output device 12. There, the documents 10 are sorted into three different sort levels and output to the

corresponding output trays 13. On the way between the input device 11 and the output device 12, a document 10 that is to be verified is transported along a measurement device 15. The measurement device 15 measures the authenticity characteristics of the document 10 to be verified. If necessary, the status characteristics of document 10 are also measured. The dotted line in the measurement device 15 is to indicate that the measurement device 15 can have two or more sub-devices, in which the authenticity characteristics and, if necessary, the status characteristics can be measured separately. However, in principle it is also possible to measure both the authenticity and the status characteristics together in a single measurement device. In the given example, the measurement is carried out by the measurement device 15 only on one side of the document 10 to be verified.

Page 7

In general, the device can also be designed in such a way that the document 10 can be measured from both sides, e.g. by two measuring devices 15, which are arranged opposite from each other and through with the document 10 will be transported.

Information about the characteristics measured in the measuring device 15 will be send to an evaluation device 16, in which the verification for authenticity in accordance with the invention is carried out. The computer program checks, for example, if an authenticity characteristic measured on the document 10 to be verified, e.g. the optical reflection, is larger than the threshold value assigned to the optical reflection for the corresponding authenticity level. If the test result is positive, the document 10 is assigned to a certain authenticity level, e.g. by writing a number corresponding to the authenticity level in a variable characterizing the authenticity of document 10. If the test result is negative, the computer program continues the verification of the measured authenticity characteristics on the basis of lower threshold values assigned to other authenticity levels, i.e. less strict authenticity criteria, and assigns the document 10 to a corresponding authenticity level. In general, this procedure leads to a separation of the authenticity characteristics, i.e. less

measured authenticity features, of the documents 10 to be verified into different authenticity levels. If all these verifications give a negative result, the document 10 is classified as forged.

In a preferred further development of the method, the status condition of the document 10 is additionally determined from the measured status characteristics. The document 10 is then assigned to one of several status levels, which are characteristic for the respective status condition of the document to be checked.

Page 8

When verifying bills, three status levels are generally provided, namely one for the unfit condition, one for the fit condition and one for the very good condition (ATM fit). The selection of the authenticity level in the subsequent verification of authenticity is then carried out depending on the status level assigned to the document 10 to be verified. Preferentially, the bills in very good condition (ATM fit) are subjected to very strict authenticity criteria, whereas bills in unfit or fit condition must only fulfill the less strict authenticity criteria of the other authenticity levels in order to still be classified as authentic. In order to increase the reliability of the verification of authenticity, it is also possible to carry out an additional verification of authenticity on the documents 10 of a certain status level, for example on bills in a suitable (fit) or very good (ATM fit) condition. Such an additional verification of authenticity can be carried out, for example, on the basis of the data already measured for the individual authenticity characteristics.

The determination of unitization can, in principle, also be carried out by the measurement device 15 and the evaluation device 16; if necessary, this can also be carried out in separate measurement and evaluation devices.

In a typical sort mode, for example for the usage in a bill processing machine for the checking and balancing of deposits, the documents 10 are divided into one or more

sorting levels and output into the corresponding output trays 13. In this case, the output device 12 is controlled by the evaluation device 16 in such a way that in one of the first output trays 13 bills — possibly from only one desired unitization – are output, which are in very good condition (ATM fit) to which a high authenticity level with high demands on authenticity, i.e. strict authenticity criteria, was assigned and which are in the desired position, i.e. a certain print pattern is visible from above, and, possibly, aligned in a certain manner.

Page 9

Into a second output tray, the so-called reject tray, those bills are output, to which no authenticity level could be assigned and/or which are not in the desired position and/or which, possibly, do not belong to the desired unitization. The wrongly input and/or transported bills, e.g. double prints or folded bills, are possibly also output into this tray. Finally, all the remaining bills, i.e. usable (fit) bills, unusable (unfit) bills and bills, to which an authenticity level with lower demands on authenticity — i.e. less strict authenticity criteria were assigned, are output into a third output tray. For example, if a stack of bills of a certain unitization is input in a mixed position, with this sort mode it is possible to sort those bills of a certain unitization which are authentic with a high degree of probability, show a very good condition (ATM fit) and are at the same time in the desired position. Bills which meet these criteria can then be readied for an immediate re-release, e.g. in an SB recycling machine.

Figure 2 shows the schematic layout of a system for the verification of authenticity on the basis of authenticity criteria determined by using forged documents; The mode of operation of such a system differs from the system shown in Figure 1 mainly by the fact that the verification of authenticity carried out in the evaluation device is performed in two steps. In a first step, the verification of authenticity is carried out by using the authenticity criteria — preferably divided into authenticity levels.

Page 10

In this case, the selection of the authenticity level can be performed, as explained already in connection with Figure 1, depending on the detected condition of the document 10 to be verified. If the measured authenticity characteristics meet the preset authenticity criteria, the corresponding authenticity level is assigned to the document 10. In a second step of the verification of authenticity, an additional verification is carried out using the authenticity criteria, which were determined on the basis of know forged documents. In this case, the determination of these authenticity criteria is performed in suitable bill verification machines, e.g. in a central bank or a corresponding service provider. For reasons of data reduction, preferably those authenticity criteria are used, which are characteristic for the difference between a forged and an authentic document. The authenticity criteria used for the verification of authenticity in the second step are transmitted in the present example by a control device 31, e.g. by a server of a central bank or a central service provider, by a wired or wireless connection 32 to one or several checking stations 30 simultaneously. But the transmission of the corresponding data can also be carried out with a suitable data carrier, e.g. by Flash Card, memory chips, Floppy Disk, CD or DVD. If a corresponding characteristic difference is detected in the second step of the verification of authenticity, the document 10 can be identified with a high degree of probability as a forgery, even if it meets the authenticity criteria of the first step of the verification of authenticity. In principle, the temporal order of the two steps can be chosen randomly.

All in all, this system permits the easy and quick simultaneous updating of the characteristics and criteria for the verification of authenticity of bills in arbitrary number of checking stations 30, so that a high reliability in the detection of forged bills in circulation is guaranteed.

Page 11

Figure 3 shows the schematic layout of a system for the application of the verification of authenticity in accordance with the invention. Documents 10, in this case bills, are

deposited by a user at a business bank 39. The deposit can be made, for example, at the terminal of an SB recycling machine. In the checking station 30, which can be part of the terminal, the bills are verified for authenticity. If the bills correspond to the very strict authenticity criteria of a selected authenticity level, they can immediately be made available for withdrawal, e.g. on the same terminal, on other output terminals 34 and/or at a bank counter 36. All the bills, which do not meet these very strict authenticity criteria, will be transported to a central verification device 35, for example in a central bank 40, in order to be subjected to a further verification of authenticity, where that verification process also uses the so-called high-security characteristics on the basis of which a reliably detection of forged bills is guaranteed. Bills, which meet these criteria, can now be returned to circulation by being transported to an output terminal 34 of a business bank 39 for withdrawal or to a bank counter 36.

In this example, there is also a control unit 31, in which — as already mentioned in the description to Figure 2 — additional authenticity criteria are determined on the basis of forged bills, which criteria refer to the characteristic differences between authentic bills and the bills recognized in the central checking device 35 as forgeries. The forgeries can, in this case, be transported directly from the checking device 35 to the control unit 31.

Page 12

The authenticity criteria determined there will then by transmitted to the checking station 30 through the connection 32 and can be used there — if necessary in addition to the authenticity criteria assigned to the various authenticity levels — for the verification of authenticity of bills.

Additionally, in order to enable the backtracing of deposited forgeries, characteristic data, e.g. print images and/or serial numbers, of the deposited bills are stored together with the data of the depositor, e.g. account number and PIN number, in the control

unit 31. If a bill is recognized in the central checking device 35 as a forgery, the characteristic data, e.g. print images and/or serial numbers, of the bill are transmitted to the control unit 31. There, the depositor of the forged bill can be identified by comparing the stored data with the transmitted data. As shown, the control unit 31 can be installed either inside the business bank 39 or outside of it, for example in the facility of a central service provider.

The system shown in Figure 3 treats the application of the method for the verification of authenticity of bills in a money deposit machine of a business bank in an exemplary fashion. In principle, the verification of authenticity can also be carried out in a bill processing machine, in which the bills — e.g. after being deposited at the counter of a business bank — are input by an employee for verification and/or sorting. The verification of authenticity and the subsequent procedure during sorting, re-circulation and/or transmission for verification in a central bank are carried out in an analogous way.

Page 13

Patent claims

1. Procedure for the verification of authenticity of documents, in which a document (10) is verified by means of authenticity criteria

marked by the fact that

- - at least two different levels of authenticity with at least one authenticity criterion, respectively, are provided, where each individual authenticity level differs from the other in at least one authenticity criterion.

- - one authenticity level is selected from the various authenticity levels, and the document (10) is verified on the basis of the authenticity criteria of the selected authenticity level, and

- the selected authenticity level is assigned to the document (10) when the authenticity criteria of this level are met by the document (10).

2. Procedure in accordance with claim 1, marked by the fact that when the authenticity criteria of the selected authenticity level are not me, a further authenticity level is selected, and the verification of authenticity is repeated by using the authenticity criteria of this additionally selected authenticity level.

3. Procedure in accordance with the above claims, marked by the fact the condition and/or the unitization of the document (10) is determined, following which the authenticity level is selected based on the condition and/or the unitization of the document (10).

4. Procedure in accordance with claim 3, marked by the fact that the condition of the document (10) can be divided into status condition levels, a status condition level being assigned to the document (10) in accordance with its condition, after which the authenticity level for the verification of authenticity of the document (10) is selected in accordance with the status condition level assigned to the document (10).

Page 14

5. Procedure in accordance with one of the above claims, marked by the fact that the individual documents (10) can be sorted in accordance with authenticity level to which they are assigned.

6. Procedure in accordance with claim 5, marked by the fact that the individual documents (10) are sorted in accordance with their status condition, if necessary their status condition level, and/or their unitization.

7. Procedure in accordance with one of the claims 5 or 6, marked by the fact that the

documents (10) are sorted and, thus, divided into one or several sort levels, where to a first sort level those documents (10) are assigned, which are in very good condition (ATM fit), to which a certain authenticity level has been assigned, which are in the desired position and/or which belong to a desired unitization.

8. Procedure in accordance with claim 7, marked by the fact that to a second sort level those document (10) are assigned, to which none of the authenticity levels was assigned and/or which are not in the desired position and/or which do not belong the desired unitization.

9. Procedure in accordance with claim 8, marked by the fact that to a third sort class the remaining documents (10) are assigned, which were not assigned to the first or second sort level.

10. Procedure in accordance with one of the claims 7 to 9, marked by the fact that the documents (10) assigned to the first sort level can be made available for an immediate further utilization.

11. Procedure in accordance with one of the claims 9 to 10, marked by the fact that the documents (10) assigned to the third sort level are transmitted to a checking device (35) and there subjected to a further verification of authenticity, especially on the basis of additional authenticity criteria.

12. Procedure in accordance with claim 11, marked by the fact that the following documents (10), checked by the checking device (35), are made available for further utilization: documents in good (fit) or very good (ATM fit) condition, and documents meeting the authenticity criteria for the verification of authenticity in a central checking device (35).

13. Procedure in accordance with one of the above claims, marked by the fact that the documents (10) are deposited by a depositor and transmitted for the verification of authenticity and that the data identifying the depositor and the characteristic data of the deposited documents (10) are stored together.

14. Procedure for the verification of authenticity of documents, especially in accordance with one of the above claims, in which
- a document (10) is verified on the basis of authenticity criteria, and
- the document (10) is classified as authentic when the authenticity criteria are met

marked by the fact that at least a part of the authenticity criteria used for the verification of authenticity, is determined on the basis of forged documents (10).

Page 16

15. Procedure in accordance with claim 14, marked by the fact that the verification of authenticity is carried out in a checking station (30) and at least a part of the authenticity criteria used for the verification of authenticity in the checking station (30) is determined in a control unit on the basis of forged documents (10).

16. Procedure in accordance with claim 15, marked by the fact that information regarding the authenticity criteria, which were established on the basis of forged documents (10), are transmitted from the control unit (31) to the checking station (30).

17. Procedure in accordance with claim 16, marked by the fact that information transmitted from the control unit (31) to the checking station (10) relate to the characteristic differences between a forged and an authentic document (10).

18. Device for the verification of authenticity of documents, especially bank notes (bills), valuable documents or security documents, with
- at least one measuring device (15) for the measurement of at least one authenticity

feature on a document (10) to be verified, and
- at least one evaluation device (16) for the verification of the measured authenticity feature on the basis of authenticity criteria,

marked by the fact that the evaluation device (16) is designed for the verification of authenticity of the document (10), based on the authenticity criteria of an authenticity level selected from among several different authenticity levels, where
- the authenticity levels comprise one or mere authenticity criteria and each level differs from the others in at least one authenticity criterion, and

Page 17
- the selected authenticity level is assigned to the document (10) when the authenticity criteria of this level are met by the document (10).

19. Device in accordance with claim 18, marked by the fact that the measuring device (15) is designed for the measurement of at least one status feature, which characterizes the status condition of a document (10) to be verified, and the evaluation device (16) is designed for the determination of the status condition of the document (10) from the measured status feature, and for the selection of the authenticity level in accordance with the determined status condition of the document (10).

20. Device in accordance with one of the claims 18 to 19, marked by the fact that an output device (12) is provided for the output of the documents (10) sorted by authenticity level and/or their status condition and/or their unitization.

21. Device for the verification of authenticity of documents, especially bank notes (bills), valuable documents or security documents, with
- at least one measuring device (15) for the measurement of at least one authenticity feature on a document (10) to be verified, and
- at least one evaluation device (16) for the verification of the measured authenticity

feature on the basis of authenticity criteria,

marked by the fact that the evaluation device (16) is designed for the verification of authenticity of the document (10), based on authenticity criteria which were determined on the basis of forged documents (10).

22. Device in accordance with claim 21, marked by the fact that a control device (31) is provided, designed for the determination of the authenticity criteria based on forged documents (31), and from which the information to the determined authenticity criteria that were based on the forged documents (10) can be transmitted to an evaluation device (16).